FKBP immunophilin homolog. More specifically, an analysis of the Dayhoff database (version 35.45 SwissProt 35) evidenced significant homology between the PRO381 amino acid sequence and the following Dayhoff sequences, AF040252_1, I49669, P_R93551, S71238, CELC05C8_1, CEU27353_1, MIP_TRYCR, CEZC455_3, FKB4_HUMAN and I40718.

EXAMPLE 25: Isolation of cDNA Clones Encoding Human PRO386

A consensus sequence was obtained relative to a variety of EST sequences as described in Example 1 above, wherein the consensus sequence obtained is herein designated DNA40674. Two proprietary Genentech EST sequences were employed in the consensus sequence assembly, wherein those EST sequences are herein designated DNA23350 (Figure 56; SEQ ID NO:151) and DNA23536 (Figure 57; SEQ ID NO:152). Based on the DNA40674 consensus sequence, oligonucleotides were synthesized: 1) to identify by PCR a cDNA library that contained the sequence of interest, and 2) for use as probes to isolate a clone of the full-length coding sequence for PRO386.

A pair of PCR primers (forward and reverse) were synthesized:

forward PCR primer 5'-ACGGAGCATGGAGGTCCACAGTAC-3' (SEQ ID NO:153)

reverse PCR primer 5'-GCACGTTTCTCAGCATCACCGAC-3' (SEQ ID NO:154)

Additionally, a synthetic oligonucleotide hybridization probe was constructed from the consensus DNA40674 sequence which had the following nucleotide sequence

hybridization probe

5'-CGCCTGCCCTGCACCTTCAACTCCTGCTACACAGTGAACCACAAACAGTT-3' (SEQ ID NO:155)

In order to screen several libraries for a source of a full-length clone, DNA from the libraries was screened by PCR amplification with the PCR primer pair identified above. A positive library was then used to isolate clones encoding the PRO386 gene using the probe oligonucleotide and one of the PCR primers. RNA for construction of the cDNA libraries was isolated from human fetal brain tissue (LIB153).

DNA sequencing of the clones isolated as described above gave the full-length DNA sequence for PRO386 [herein designated as UNQ326 (DNA45415-1318)] (SEQ ID NO:149) and the derived protein sequence for PRO386.

The entire nucleotide sequence of UNQ326 (DNA45415-1318) is shown in Figure 54 (SEQ ID NO:149). Clone UNQ326 (DNA45415-1318) contains a single open reading frame with an apparent translational initiation site at nucleotide positions 146-148 and ending at the stop codon at nucleotide positions 791-793 (Figure 54). The predicted polypeptide precursor is 215 amino acids long (Figure 55). The full-length PRO386 protein shown in Figure 55 has an estimated molecular weight of about 24,326 daltons and a pI of about 6.32. Analysis of the full-length PRO386 sequence shown in Figure 55 (SEQ ID NO:150) evidences the presence of the following: a signal peptide from about amino acid 1 to about amino acid 20, a transmembrane domain from about amino acid 161 to about amino acid 179, an immunoglobulin-like fold from about amino acid 83 to about amino acid 127 and potential N-glycosylation sites from about amino acid 42 to about amino acid 45, from about amino acid 66 to about amino acid 69 and from about amino acid 74 to about amino acid 77. Clone UNQ326 (DNA45415-1318) has been deposited with ATCC on April 28, 1998 and is assigned ATCC deposit no. 209810.

Analysis of the amino acid sequence of the full-length PRO386 polypeptide suggests that it possesses

significant sequence similarity to the sodium channel beta-2 subunit, thereby indicating that PRO386 is a novel homolog thereof. More specifically, an analysis of the Dayhoff database (version 35.45 SwissProt 35) evidenced significant homology between the PRO386 amino acid sequence and the following Dayhoff sequences, A57843, MYP0_HUMAN, GEN14531, JC4024, HS46KDA_1, HSU90716_1, D86996_2, MUSIGLVD_1, DMU42768_1 and S19247.

EXAMPLE 26: Isolation of cDNA Clones Encoding Human PRO540

A consensus sequence was obtained relative to a variety of EST sequences as described in Example 1 above, wherein the consensus sequence obtained is herein designated DNA39631. Based on the DNA39631 consensus sequence, oligonucleotides were synthesized: 1) to identify by PCR a cDNA library that contained the sequence of interest, and 2) for use as probes to isolate a clone of the full-length coding sequence for PRO540.

Forward and reverse PCR primers were synthesized:

forward PCR primer 5'-CTGGGGCTACACACGGGGTGAGG-3' (SEQ ID NO:158)

reverse PCR primer 5'-GGTGCCGCTGCAGAAAGTAGAGCG-3' (SEQ ID NO:159)

Additionally, a synthetic oligonucleotide hybridization probe was constructed from the consensus DNA40654 sequence which had the following nucleotide sequence

hybridization probe

5'-GCCCCAAATGAAAACGGGCCCTACTTCCTGGCCCTCCGCGAGATG-3'

(SEQ ID NO:160)

In order to screen several libraries for a source of a full-length clone, DNA from the libraries was screened by PCR amplification with one of the PCR primer pairs identified above. A positive library was then used to isolate clones encoding the PRO540 gene using the probe oligonucleotide and one of the PCR primers. RNA for construction of the cDNA libraries was isolated from human fetal kidney tissue (LIB227).

DNA sequencing of the clones isolated as described above gave the full-length DNA sequence for PRO540 [herein designated as UNQ341 (DNA44189-1322)] (SEQ ID NO:156) and the derived protein sequence for PRO540.

The entire nucleotide sequence of UNQ341 (DNA44189-1322) is shown in Figure 58 (SEQ ID NO:156). Clone UNQ341 (DNA44189-1322) contains a single open reading frame with an apparent translational initiation site at nucleotide positions 21-23 and ending at the stop codon at nucleotide positions 1257-1259 (Figure 58). The predicted polypeptide precursor is 412 amino acids long (Figure 59). The full-length PRO540 protein shown in Figure 59 has an estimated molecular weight of about 46,658 daltons and a pI of about 6.65. Important regions of the amino acid sequence of PRO540 include the signal peptide, potential N-glycosylation sites, a potential lipid substrate binding site, a sequence typical of lipases and serine proteins, and a beta-transducin family Trp-Asp repeat. Clone UNQ341 (DNA44189-1322) has been deposited with ATCC and is assigned ATCC deposit no. 209699.

EXAMPLE 27: Isolation of cDNA Clones Encoding Human PRO615

A consensus sequence was obtained relative to a variety of EST sequences as described in Example 1

above, wherein the consensus sequence obtained is herein designated DNA42240. Based on the DNA42240 consensus sequence, oligonucleotides were synthesized: 1) to identify by PCR a cDNA library that contained the sequence of interest, and 2) for use as probes to isolate a clone of the full-length coding sequence for PRO615.

Forward and reverse PCR primers were synthesized:

forward PCR primer 5'-TGGTCTTCGCCTTGATCGTGTTCT-3' (SEQ ID NO:163)

forward PCR primer 5'-GTGTACTGAGCGGCGGTTAG-3' (SEQ ID NO:164)

reverse PCR primer 5'-CTGAAGGTGATGGCTGCCCTCAC-3' (SEQ ID NO:165)

reverse PCR primer 5'-CCAGGAGGCTCATGGGAAAGTCC-3' (SEQ ID NO:166)

Additionally, a synthetic oligonucleotide hybridization probe was constructed from the consensus DNA42240 sequence which had the following nucleotide sequence:

hybridization probe

5'-CCACGAGTCTAAGCAGATGTACTGCGTGTTCAACCGCAACGAGGATGCCT-3'

(SEQ ID NO:167)

In order to screen several libraries for a source of a full-length clone, DNA from the libraries was screened by PCR amplification with one of the PCR primer pairs identified above. A positive library was then used to isolate clones encoding the PRO615 gene using the probe oligonucleotide and one of the PCR primers. RNA for construction of the cDNA libraries was isolated from human bone marrow tissue (LIB255).

DNA sequencing of the clones isolated as described above gave the full-length DNA sequence for PRO615 [herein designated as UNQ352 (DNA48304-1323)] (SEQ ID NO:161) and the derived protein sequence for PRO615.

The entire nucleotide sequence of UNQ352 (DNA48304-1323) is shown in Figure 60 (SEQ ID NO:161). Clone UNQ352 (DNA48304-1323) contains a single open reading frame with an apparent translational initiation site at nucleotide positions 51-53 and ending at the stop codon at nucleotide positions 723-725 (Figure 60). The predicted polypeptide precursor is 224 amino acids long (Figure 61). The full-length PRO615 protein shown in Figure 61 has an estimated molecular weight of about 24,810 daltons and a pI of about 4.75. Important regions of the amino acid sequence of PRO615 include a type II transmembrane domain, corresponding to about amino acids 24-43, other transmembrane domains, corresponding to about amino acids 74-90, 108-126, and 145-161, respectively, and a potential N-glycosylation site, corresponding to about amino acids 97-100. Clone UNQ352 (DNA48304-1323) has been deposited with ATCC and is assigned ATCC deposit no. 209811.

EXAMPLE 28: Isolation of cDNA Clones Encoding Human PRO618

A consensus sequence was obtained relative to a variety of EST sequences as described in Example 1 above, wherein the consensus sequence obtained is herein designated DNA30900. Based on the DNA30900 consensus sequence, oligonucleotides were synthesized: 1) to identify by PCR a cDNA library that contained the sequence of interest, and 2) for use as probes to isolate a clone of the full-length coding sequence for PRO618.